

Apparatus and Methods for Gas Production During Pressure Letdown in Pipelines

Abstract:

5 Apparatus, methods and an installation are provided for reducing pressure in a
carrier line, such as a natural gas pipeline, and capturing the resultant waste energy. The
apparatus is comprised of a flow converter for gaseous communication with a carrier line
and an electricity generator mechanically linked to the flow converter for transforming the
excess energy resulting from the pressure drop into electrical energy, such that in use, the
10 energy released from the pressure drop can be captured and utilized for the production of
gases such as hydrogen.